DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, RECTANGULAR, NANOMINIATURE, SINGLE ROW, PLUG, POLARIZED SHELL, PIN CONTACTS, CRIMP TYPE

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-32139.

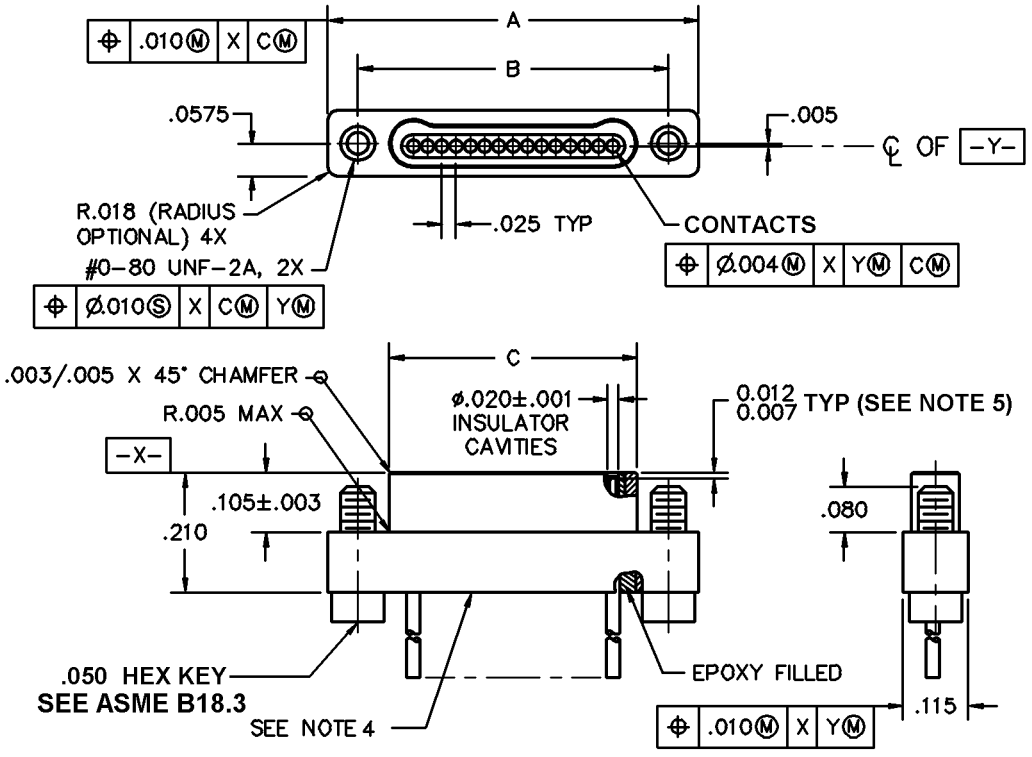


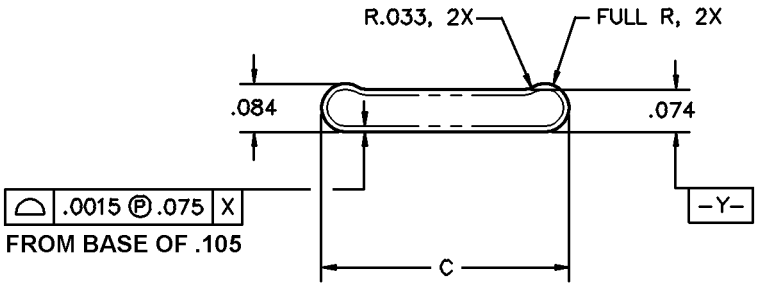
FIGURE 1. Nano connector dimensions and configurations.

Insert arrangement	A	B BSC	C BSC
9	.500 (12.70)	.395 (10.03)	.284 (7.21)
15	.650 (16.51)	.545 (13.84)	.434 (11.02)
21	.800 (20.32)	.695 (17.65)	.584 (14.83)
25	.900 (22.86)	.795 (20.19)	.684 (17.37)
31	1.050 (26.67)	.945 (24.00)	.834 (21.18)
37	1.200 (30.48)	1.095 (27.81)	.984 (24.99)
51	1.550 (39.37)	1.445 (36.70)	1.334 (33.88)

Inches	mm
.001	0.02
.003	0.08
.004	0.10
.005	0.13
.007	0.18
.010	0.25
.012	0.30
.018	0.46
.020	0.51
.025	0.63
.050	1.27
.0575	1.46
.080	2.03
.105	2.67
.115	2.02
.210	5.33

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified tolerances are ±.005 inch (0.13 mm) angular tolerance ±2°.
4. Surface from which the lead length is measured.
5. Shell shall be flush to insulator within ±.004 inch (0.10 mm).
6. 30 AWG wire is the largest wire size that can be used in the connector assembly.

FIGURE 1. Nano connector dimensions and configurations - Continued.

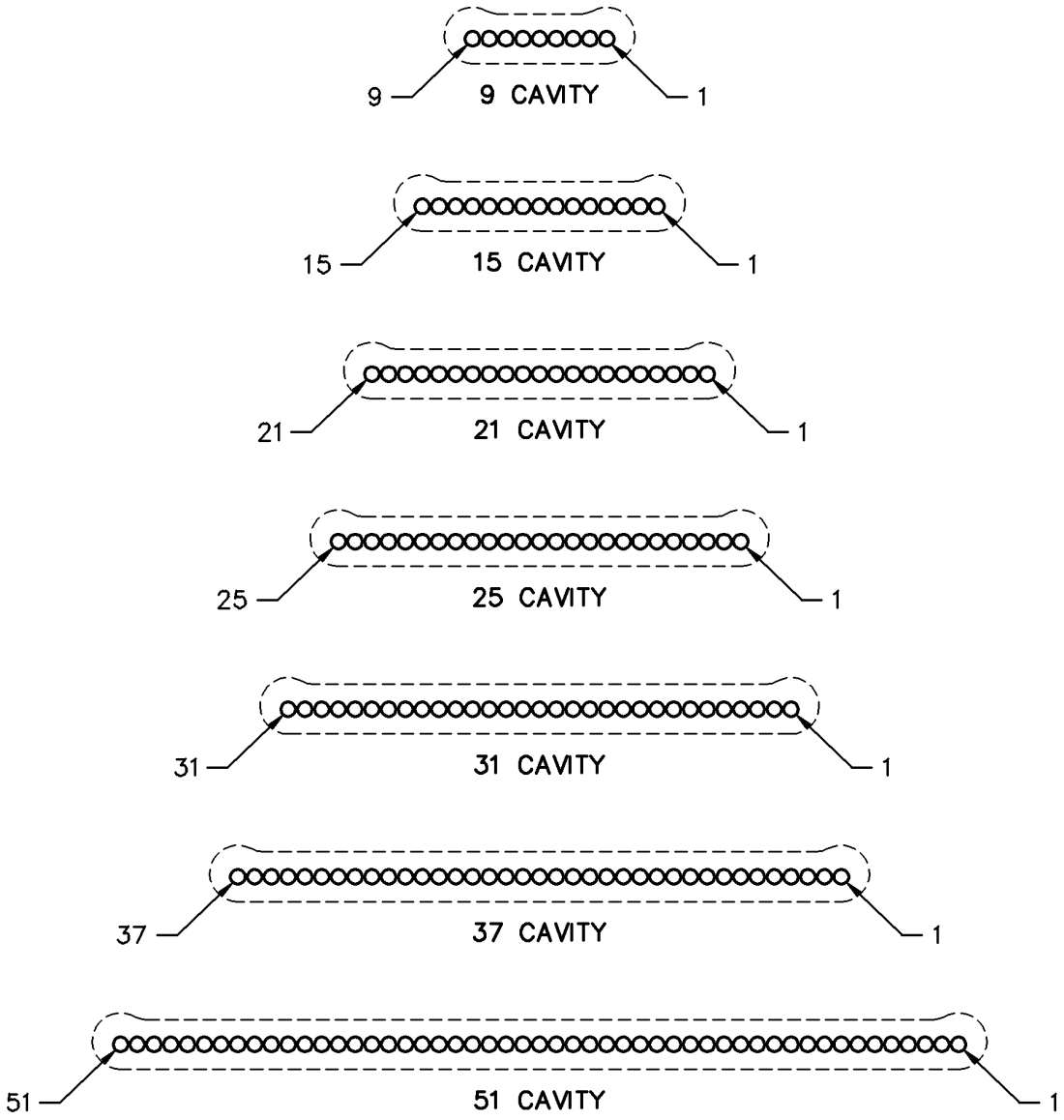


INTERFACE DETAIL

Inches	mm
.0015	0.038
.033	0.84
.074	1.88
.075	1.90
.084	2.13

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified tolerances are ±.005 inch (0.13 mm).

FIGURE 2. Nano connector interface.



NOTES:
1. Engaging face of insert shown.
2. Cavity identification numbers are for reference only and do not appear on the part.

FIGURE 3. Nano connector insert arrangement.

REQUIREMENTS:

Dimensions and configuration see figures 1, 2, and 3.

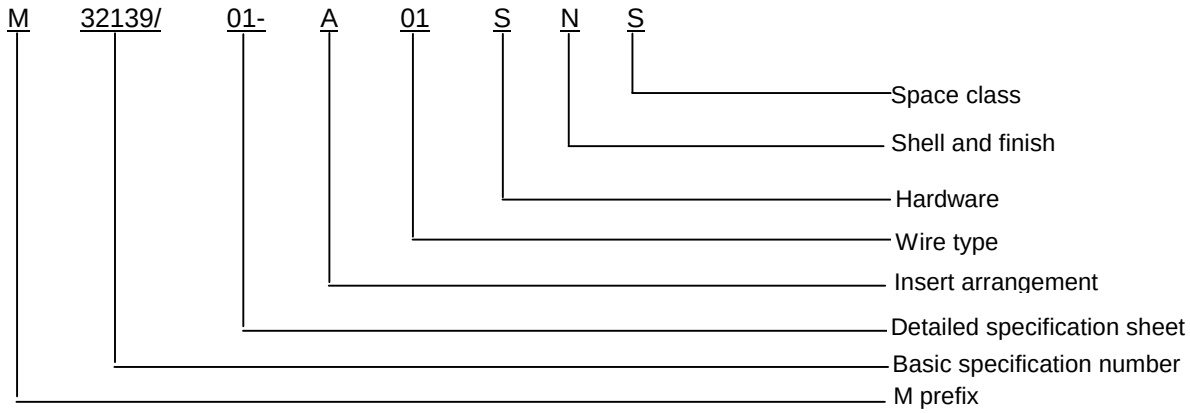
This specification sheet describes the pin side of a rectangular connector. This connector uses reverse gender contacts, i.e., the live pin is recessed in the insulator with the static socket protruding from a shrouded interface.

Contact connection: The pin contact, which is recessed in the insulator, is normally connected to the live side of the circuit.

Pins are terminated with 30 AWG wire.

Mating receptacle: Shall be in accordance with MIL-DTL-32139/2.

Part or Identifying Number (PIN):



Insert arrangement	Wire type 1/
A = 9	01 = NEMA HP3-ETXBB9 6 inches (152 mm) long
B = 15	02 = NEMA HP3-ETXBB9 18 inches (457 mm) long
C = 21	03 = NEMA HP3-ETXBB9 36 inches (914 mm) long
D = 25	04 = NEMA HP3-ETXBB( ) 6 inches long 2/
E = 31	05 = NEMA HP3-ETXBB( ) 18 inches long 2/
F = 37	06 = NEMA HP3-ETXBB( ) 36 inches long 2/
G = 51	07 = MIL-W-22759/33-30-9 6 inches (152 mm) long 3/
	08 = MIL-W-22759/33-30-9 18 inches (457 mm) long 3/
	09 = MIL-W-22759/33-30-9 36 inches (914 mm) long 3/
	10 = MIL-W-22759/33-30-( ) 6 inches (152 mm) long 2/ 3/
	11 = MIL-W-22759/33-30-( ) 18 inches (457 mm) long 2/ 3/
	12 = MIL-W-22759/33-30-( ) 36 inches (914 mm) long 2/ 3/

Hardware 4/	Shell and finish	Space class
S = Jackscrew captivated	C = Aluminum cadmium finish	Blank for non-space applications.
	N = Aluminum electroless nickel finish 5/	S = Space class
	S = Passivated stainless steel	
	T = Titanium	

1/ Pig tail wire lead tolerance is +1.00 inch/-0.0 inch (25.4/-0.0 mm).
2/ Color coding in accordance with MIL-STD-681, system 1, except using ten solid colors only in repeating sequence.
3/ Corrosion has been experienced on M32139 connectors that are prewired with MIL-W-22759/33 wires and stored in a sealed environment. CAUTION SHOULD BE EXERCISED WHEN USING THIS WIRE.
4/ Supplied installed.
5/ When aluminum shells are required for space applications electroless nickel finish is the only finish acceptable for space applications (see MIL-DTL-32139).

Referenced documents: In addition to MIL-DTL-32139, this document references the following:

MIL-W-22759/33 ASME B18.3
MIL-DTL-32139/2 NEMA HP3
MIL-STD-681

CONCLUDING MATERIAL

Custodians:
Army - CR
Navy - EC
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

(Project 5935-4618-001)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at www.dodssp.daps.mil.